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A Public Health Survey  
*of Greenwich, Connecticut*  
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A PUBLIC HEALTH SURVEY  
OF  
GREENWICH, CONNECTICUT

By

IRA V. HISCOCK, M. A., C. P. H.  
Assistant Professor of Public Health  
Yale School of Medicine

Assisted by

ROSCOE H. SUTTIE, C. E.  
Assistant Professor of Civil Engineering  
Yale University

and

J. J. BATCHELOR, M. D.  
J. D. CASE, C. P. H.  
KATHARINE I. CRISWELL, C. P. H.  
MARION H. DOUGLAS, R. N.  
ELIZABETH H. FLEESON, PH. D.  
ROBERT JORDAN, C. P. H.  
H. J. SHAUGHNESSY, B. Sc.  
MARGARET F. UPTON, PH. D.

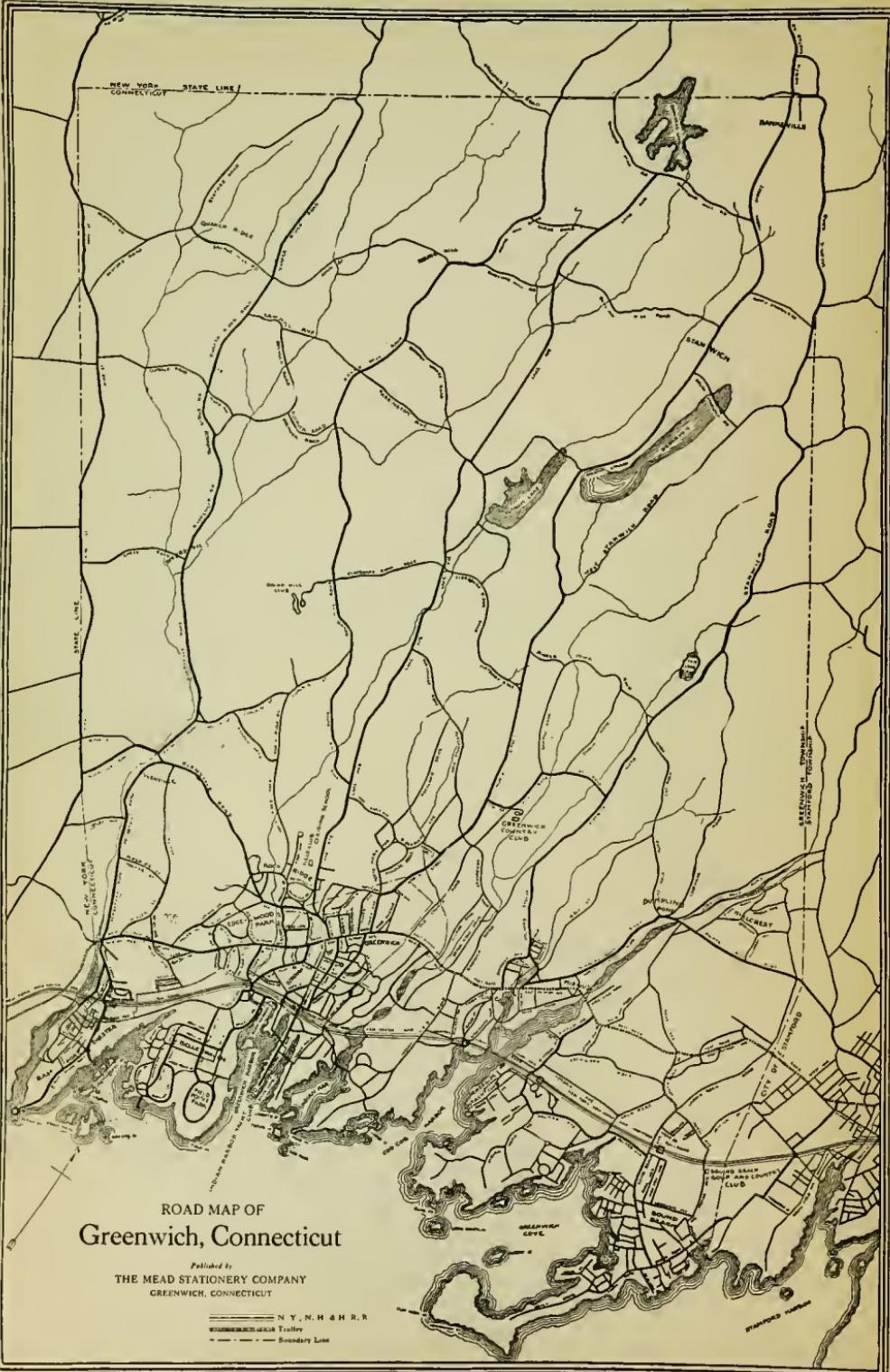
Of the Department of Public Health,

with an introductory note by

C.-E. A. WINSLOW, DR. P. H.

Professor of Public Health, Yale School of Medicine

MAY 1971



ROAD MAP OF  
**Greenwich, Connecticut**

Published by  
**THE MEAD STATIONERY COMPANY**  
GREENWICH, CONNECTICUT

N.Y.N.H.&H.R.R.  
— Greenwich Trolley  
- - - Boundary Line

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## Introductory Note

The appended survey of the health situation in Greenwich presents an interesting if not unusual picture. Professor Hiscock speaks of Greenwich as geographically the first town in the State of Connecticut. In many other ways Greenwich occupies a position of unique distinction on account of its natural beauty, its wealth, prosperity, and public spirit. On the other hand, the survey indicates that two-thirds of the population of Greenwich is foreign born or of foreign born parentage and this fact, in part, prepares us for the notable inequalities that are evident in regard to the various aspects of its health program.

Greenwich has developed through its health department and board of education excellent control of milk and food supplies and, in many respects, communicable diseases, and an admirable system of child welfare supervision and of school medical inspection. The town has shown somewhat unusual enterprise in providing not only for such purely instructive public health nursing work as is usually performed by the health department but also for regular district nurses under the auspices of the health department. Private agencies in Greenwich are, at the present time, taking little active part in the public health campaign.

On the other hand, certain striking and important gaps are noted in the scheme of community health protection. The geographical and geological conditions are such as to make the problem of sewerage an unusually difficult one, and conditions at Sound Beach and Cos Cob have been particularly bad. The former situation has been cared for by recent action but it is evident that the problem of sewerage in the Cos Cob region should receive the earnest attention of the citizens.

Provision for a better disposal of garbage is also urgently needed and it might be well for the municipal authorities to give consideration to the recent study of this problem by Dr. L. E. Poole, health officer of Fairfield, as offering suggestions of the lines along which solution of the problem might be found. There is also urgent need in many sections of the town for much more intensive control of general sanitary conditions than has been possible in the past. The opportunities for the spread of typhoid fever and other intestinal diseases from unguarded privies and overflowing cesspools are exceedingly numerous. The suggestions made by Professor Hiscock that plumbing inspection (which is not properly a public health function) should be transferred to another department and that the health department should be provided instead with a full time sanitary inspector is an admirable one.

I am also heartily in accord with Professor Hiscock's recommendation that a new communicable disease hospital should be provided and placed

under the direction of the health department and that the whole problem of hospitalization of cases of communicable disease including tuberculosis and the venereal diseases should be given thorough preliminary study by a special commission.

The town, as pointed out above, has been unusually progressive in its policy toward public health nursing, but it seems essential for maximum efficiency that the nurses employed by the health department and the board of education should be organized in a common staff with a competent supervisor to direct their work. The conduct of piece-meal and conflicting nursing work without provision for supervision is always an un-economical and undesirable procedure.

The primary responsibility for the health program of any community must and should rest with the city or town health officer. It is often most desirable, however, that the official health authorities should have the support of an organized group representing the interest of the community at large in the public health program. I would urge, therefore that there be organized in Greenwich a local public health association working independently of the health officer but in close co-operation with him. Such an association or committee could make a continuing study of the health problems of the town and could be ready at all times to furnish to the health officer the aid and support which he needs in securing appropriations necessary for the most effective conduct of his work.

In closing I would like to emphasize that there is nothing novel or striking in these recommendations. The health officer in Greenwich is fully cognizant of the situation and has sought to remedy its weaknesses so far as lies in his power. What is needed now is concerted community effort which will make it possible for him to realize his ideas and to make Greenwich the first town in Connecticut in its health program as well as in other respects.

C.-E. A. WINSLOW.  
Professor of Public Health.

# A Public Health Survey of Greenwich, Connecticut

## 1925\*

**Purpose of the Survey.** Residents of Greenwich, "The Gateway to New England," may rightly be proud of their town. It has attractive homes, admirable educational facilities, an energetic board of health, an excellent general hospital, good business conditions, and many public spirited citizens. In order to make conditions even better from a health standpoint, the health officer, with the co-operation of a group of representative citizens of the community, invited the Department of Public Health of the Yale School of Medicine to make a careful analysis of the present situation and of existing health machinery, and to outline a comprehensive plan of organization for the future. It is considered sound policy for a town or city occasionally to take account of stock of its health equipment. For public health has become recognized as the "foundation upon which rest the happiness of the people and the welfare of the state."

**General Conditions.** Greenwich is geographically the first town in the State of Connecticut, twenty-eight miles from New York City. It was settled within fifteen years after the Pilgrims landed at Plymouth, and the entire territory was held by a group of twenty-seven men for a number of years before the town itself was formed. The town presents a panorama of sea, bays, coves, hills, woods, and valleys. There is but little manufacturing in Greenwich. It has always been a residential town.

The town embraces forty-eight square miles, including the borough of one square mile. It consists of many settlements, among them Banksville, Cos Cob, East Port Chester, Glenville, Mianus, Riverside, Stanwich, and Sound Beach. These facts should be borne in mind in considering public health and social problems to be later discussed in this report.

The climate is somewhat more uniform than for most New England towns. The heat of summer is tempered by cool breezes from Long Island Sound, while the winters are milder than obtain in the interior of the state. The average monthly rainfall is said to be about 3.50 inches. The average temperature from May to September inclusive is 67.5 degrees Fahrenheit.

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\*It is with pleasure that we express our appreciation of the helpful suggestions and co-operation received from representatives of the Departments of Health, Education, Charities and various other health agencies, organizations and individuals, including the Woman's Club and the Chamber of Commerce of Greenwich. Without their support this survey would not have been possible.

Greenwich is often spoken of as a wealthy community. There are approximately 7,000 dwellings, which with few exceptions, are single family homes, with enough land for breathing space and recreation. The average land value is \$687 an acre as compared with only \$46 an acre for the state as a whole. The total tax valuation averages \$3,144 per capita. While the average value of the dwellings in Greenwich runs well over \$6,000, this situation is by no means representative of conditions in several of the small settlements previously mentioned. The tax rate of seventeen mills is lower than that of surrounding towns.

The town apparently has good fire and police protection, with fairly low insurance rates. Greenwich has recently appointed a zoning commission to draft a proper zoning ordinance for the community which is a step in the right direction. Considerable interest is shown in the development of good roads and a progressive engineer is in charge of this work. Activities of this character, and those connected with draining or ditching, are somewhat more difficult than in the average community because of the geological formations in the area, consisting of a succession of ridges of rock covered with clay, with valley lines running north and south.

**Population.** The population of Greenwich, based on the United States Census estimate as of July 1, 1924, was 24,674. On a population basis there is no over-crowding although it may be borne in mind that the various settlements are widely separated by sparsely settled districts. In 1920 there were found to be 1.2 families per dwelling, 5.5 inhabitants per dwelling, with an average size of family of 4.6 persons.

The age and racial composition of the population of an American community influence its mortality rate, since the death rates among different age and race groups differ widely. Information on this point furnished by the United States Census Bureau shows that Greenwich has a foreign born, white population (27%) comparable with that for the State of Connecticut, but approximately twice as high as for the United States as a whole. As shown in the following table, there is also a large group of the population born in this country but of foreign or mixed parentage.

**Table I**  
**Composition and Characteristics of the Population of Greenwich Town,**  
**Connecticut, 1920**

Color or race, nativity, and sex:	Greenwich Borough		Balance of Greenwich Town		Total Greenwich Town	
	Total	Per Cent.	Total	Per Cent.	Total	Per Cent.
Total population	5,939	100.00	16,184	100.00	22,123	100.00
Male	2,687	45.2	8,080	49.9	10,767	48.7
Female	3,252	54.8	8,104	50.1	11,356	51.3
Native white—Native parentage	2,351	39.6	5,123	31.6	7,474	33.8
Native white—Foreign or mixed parentage	1,966	33.1	6,249	38.7	8,215	37.1
Foreign-born white	1,438	24.2	4,482	27.7	5,920	26.8
Negro	175	2.9	314	1.9	489	2.2
Indian, Chinese, Japanese, and all other	9	.2	16	.1	25	.1
Total	5,939	100.00	16,184	100.00	22,123	100.10

These data indicate that approximately 40 per cent. of the population of the borough are white people born of native parents, as compared with 32 per cent. for the rest of the town. It is also interesting to observe a much higher proportion of women to men within the borough than is the case for the balance of the town.

Through the kindness of Mr. E. C. Andrews, Superintendent of Schools, it has been possible to obtain a fairly good cross section of the relative proportion of different nationalities by a study of the public school population. From this analysis it is learned that while 95 per cent. of the children were born in the United States, the birthplace of one or both parents was in this country in only 36 per cent. of the cases; in Italy in 24 per cent.; in Poland in 10 per cent.; in Czecho-Slovakia in 9 per cent.; while in the remaining cases many different countries are represented, notably Ireland, England, Austria, Germany, and Denmark.

A classification of the population according to broad age groups indicates that the proportion of residents who are 21 years of age or older is somewhat higher in Greenwich than is found for the United States as a whole; but in general this situation corresponds closely with that of New England communities of this size.

### Classification of Population by Age

Years of Age		Per cent. of Population
Under 7	...	15.79
7-13	...	13.64
14-15	...	3.05
16-20	...	7.21
21 and over		
males	...	28.83
females	...	31.48
Total	...	100.00

It may also be noted that the proportion of the population ten years of age and over found to be illiterate is slightly lower in Greenwich (5.23%) than in the United States as a whole (6.0%). For the native white population the proportion of illiterates is very small, but for the foreign-born whites, of whom there is a relatively large number in town, the per cent. of illiterates is higher (14.5) than the average (13.1). This fact suggests a social problem which should not be overlooked.

**Vital Statistics.** A birth rate of 21.3 and a crude death rate of 11.0 per 1,000 population indicate a normal natural growth in population with a loss by death from all causes about the average. An analysis of the nationalities of these babies born in 1924 shows that 54 per cent. of them were born to native mothers; 20 per cent. to Italian mothers, with the remainder distributed among various groups of mothers, notably those born in Poland, Czecho-Slovakia, Austria and Germany.

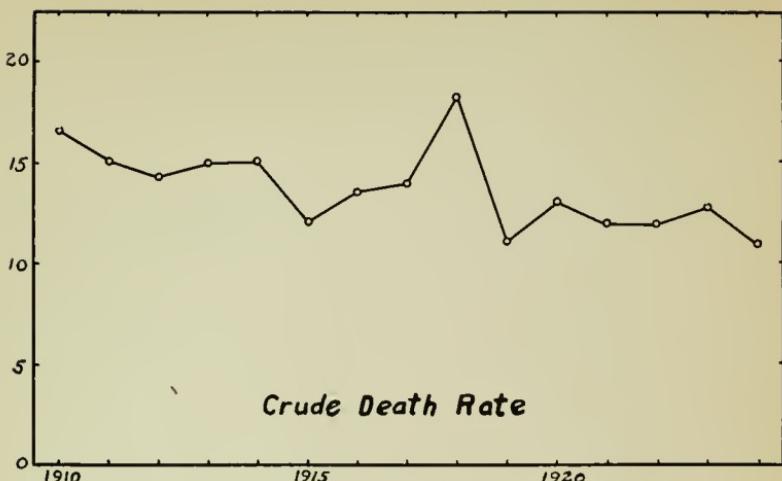


Fig. 1. Total Number of Deaths per 1,000 Population,  
Greenwich, 1910 to 1924

A careful analysis of the mortality statistics as published in the town and state reports, indicates in general that Greenwich has a very good record as compared with other New England communities of its size so far as the control of most communicable diseases is concerned. Here as elsewhere certain diseases have not yielded in any marked degree, if at all, to such control measures as have been exercised. These include particularly diseases of the heart, cancer, whooping cough, measles, and infant mortality under one month of life. Diseases of the heart headed the list of causes of death last year with a specific death rate of 137.7 per 100,000 population, while cancer stood second with a rate of 77.0. The facts for other important diseases are set forth in the following table:

Table II  
Death Rates per 100,000 population from certain important causes,  
classified by broad intervals, Greenwich, Conn.

Cause of death	Years				
	1910-14	1915-19	1920-24	1910-24	1924
Typhoid	9.0	4.0	4.4	5.5	4.0
Measles	4.5	5.8	12.7	8.1	28.3
Scarlet fever	10.1	0.9	0.8	3.5	4.0
Diphtheria	16.9	7.8	9.3	11.0	4.0
Whooping cough	6.8	6.8	9.3	7.7	4.0
Tuberculosis (all forms)	87.9	87.3	63.6	78.5	42.5
Pneumonia (all forms)	99.2	132.5	46.6	90.5	24.2
Infant Mortality (deaths of infants, per 1,000 live births)	148.0	93.0	70.5	100.0	69.3
Crude Death Rate (per 1,000 population)	15.2	13.8	12.2	13.6	11.0

From these data it may be observed that progress has been made in the last fourteen years in the saving of lives from deaths due to typhoid, scarlet fever, diphtheria, tuberculosis, and many causes associated with early childhood. The rates from pneumonia and influenza fluctuate con-

siderably in different years, and these diseases will doubtless continue to take a heavy toll until more specific knowledge is gained concerning effective measures of control. As will be pointed out again in discussing infant hygiene, the highest proportion of deaths of infants comes in the first month of life, due largely to factors arising in the prenatal period which in a large degree may be prevented.

It may be appropriate in passing to call attention to the fact that in most New England communities vital statistics records are kept by special registrars in the office of the town clerk. From the standpoint of public health it is unfortunate that such records are not maintained by the health department rather than by the town clerk. The careful analysis of these data is of immense value to the health officer in formulating his program and in measuring the results of his activities. Through studies of this character it is possible to determine more accurately than is otherwise possible where the greatest needs exist.

**Water Supply.** The public water supply is owned by the Greenwich Water Company. In addition to supplying the borough, this company also serves sections of East Port Chester, Mianus, Cos Cob, Riverside and Sound Beach. The water comes from Putnam and Rockwood Lakes, and plans are under way for the construction of a new dam above the present lakes to increase materially the total amount of water available, and allow for longer storage. Although there has been no serious shortage to date, the growth of population and extension of service makes this addition desirable. It is reported that from five to seven million gallons of water a day are drawn, there being 4,375 services in use, 4,370 of which are metered.

The water shed is systematically inspected by employees of the company. Treatment of the water consists of mechanical filtration followed by chlorination. From time to time copper sulphate is also used in attacking the algae problem which is apparently not very serious in town. Semi-monthly examinations of the water are made in the Newlands laboratories in Hartford in addition to those made regularly but less frequently by the state, and monthly by the local health department laboratory. Results of the examinations have shown the treated water to be in good condition and safe for drinking purposes.

There are approximately 600 wells still in use in town. Many of these are shallow and afford opportunity for pollution by drainage, or by leakage at the top. It is, therefore, urgently recommended that a survey of these wells be made, to ascertain whether or not they are safe for drinking purposes as a result of inspection of their surroundings and analyses of the water. Any wells that are found dangerous as a source of supply should be immediately closed up and advice given to householders as to other possibilities for obtaining water.

**Sewerage and Sewage Disposal.** The problem of sewage disposal in Greenwich is one of considerable importance. The principal activities in this connection are carried on by a sewer commission of three members in addition to a clerk. Privy sanitation is handled by the

health department. Most of the buildings in the borough are connected with the sewer which carries the sewage to Imhoff tanks on Grass Island before its discharge into the harbor beyond the island. The plant seems adequate in size to handle the present flow and progress has recently been made in increasing the sludge bed area and in improved operating routine. It does seem advisable, however, that a pump be provided for furnishing water under pressure for use at the tanks, mainly for breaking up the scum in the gas vents. It is also recommended that the chlorination equipment, which has not not been operated since its installation, be put into operating condition and used. Inasmuch as there is considerable bathing during the summer season at the nearby shores not far distant from the point where the effluent pipe discharges into the harbor, this measure seems essential.



Grass Island Sewage Disposal Plant

Another sewage disposal system is employed in East Port Chester where the sewage is treated by settling in septic tanks before its discharge into the Byram River. Chlorinating equipment is provided but is not in operation, and apparently needs over-hauling before it can be satisfactorily used. For the population served, the capacity of this plant is at present adequate. At the time of our inspection an additional sand bed area for sludge drying was in the process of construction, and this will materially improve conditions.

In addition to the importance of continued extension of sewer lines as rapidly as conditions permit in areas already sewered, at least two other sections of the town urgently need to be provided with adequate sewerage systems. It is very gratifying to note that since this survey was undertaken, provision has been made to provide a sewage disposal plant for one of these—Sound Beach—and engineers are already at work on plans and specifications. This is distinctly a step in the right direction. On account of the large amount of bathing in this vicinity, relatively complete treatment of the sewage will be necessary to insure a safe effluent.

Investigation disclosed a considerable number of unfavorable sewer outlets and privies along the banks of the Cos Cob Harbor and the Mianus River. While consideration has been given to measures for handling the sewage problem of this area, no satisfactory means have

yet been provided to meet the situation. The problem is a difficult one in view of the topography and the expense involved. But for the safety and comfort of members of the community as a whole, consideration must be given to thickly settled sections of town, where conditions are still primitive. In those areas where surface closets are tolerated, efforts should be made to see that the privies are tight and fly-proof. In many instances, too, cesspools have been installed in soil not suited for this type of system. Such conditions need careful study, and the owners of the property advised by proper authorities in order that the present situation may be remedied. This work will obviously require much time and energy on the part of trained personnel, but from the point of view of prevention of disease and nuisances, it seems to us essential.

**Health Organization.** Greenwich is governed according to the town form or organization by a board of selectmen. A board of estimate and taxation is also elected by the people. This latter board appoints four citizens of the town, one of whom must be a physician and one a lawyer, and not more than two of whom shall belong to the same political party, who, with the town health officer, ex-officio, constitute the board of health. These four regularly voting members serve without compensation for overlapping terms, in accordance with modern procedure. Stated meetings are held monthly and the minutes of these meetings are preserved. The health officer is appointed by the Judge of the Borough Court for a term of four years.

By special act of the legislature of May 17, 1915, the board of health is charged with authority necessary for the promotion, protection, and preservation of the health of the inhabitants of the town. Its powers are exceedingly broad, including the preparation and enforcement of ordinances, and special provision for child care, sanitation, food control, safe water and milk supplies, plumbing, and waste disposal. In fact the health department is at present burdened with several responsibilities, as garbage and refuse disposal, and plumbing inspection, which have come to be recognized primarily as duties of departments of engineering or public works.



Board Room and Laboratory of the Department of Health

The housing of the department is an important consideration which has been neglected in many places, but in Greenwich has received the

consideration which it deserves. The present quarters are better than the average in a community of this size, and it is understood that even more desirable rooms will be provided when the Town Hall is remodelled. There are many advantages in a centrally located health department with ample space for the different bureaus or divisions.

The community is fortunate in having as health officer a medical man of recognized ability, with eight years of public health administration experience in Greenwich. Although not serving on a full time basis in the capacity of health officer, as director of the Municipal Hospital, and as director of the medical service of the Greenwich Hospital, Dr. A. E. Austin is constantly in intimate contact with community health problems. He is assisted in this official health work by a loyal staff consisting of a bacteriologist (part time) who is also the epidemiologist; a department nurse; three district nurses; a sanitary and plumbing inspector (part time); a food and dairy inspector (part time); a dentist (part time), and two oral hygienists. An able secretary renders full time service in the office from 9 A. M. to 5 P. M. daily with the exception of Sundays and holidays.

**Finances.** The health department appropriation for the year 1925 amounts to \$36,550, or approximately \$1.44 per capita. It should be pointed out, however, that at least \$5,900 of this amount are to be spent, in accordance with the present duties of the health department, on activities which have been previously mentioned as functions which might more properly be performed by other departments of city government. This question will be discussed more fully under appropriate headings.

In addition to the expenditures through the board of health, amounting to \$33,507 in 1924; \$29,658 were spent by the commissioner of charities for salaries and maintenance of the municipal hospital (communicable diseases and chronic cases); \$7,224 for care of the insane in state and private institutions, and \$6,300 for the salaries of physicians and nurses engaged in school health work under the town school committee.

Licenses are issued to milk dealers, master plumbers, midwives, and garbage collectors. The fees from master plumbers and garbage collectors are paid to the town treasurer. No fees are charged milk dealers or midwives.

**Control of Communicable Diseases.** This work in Greenwich is handled in accordance with local sanitary regulations and the state sanitary code by the health officer, assisted by a part-time epidemiologist who also serves as bacteriologist, and by a nurse. Reporting of communicable diseases, which is the basis of effective control by the board, is apparently quite complete for typhoid fever, diphtheria, measles, and scarlet fever, but as is still generally the case, is not so satisfactory for whooping cough, venereal diseases and tuberculosis. The seriousness of whooping cough is frequently not realized with the result that parents often fail to bring cases to the attention of physicians at all or until late in the course of the disease. Early diagnosis is also difficult in many instances. Control of venereal diseases in this country is still in the de-

velopmental stage so far as securing early reports of cases and systematic treatment are concerned, although the situation is gradually improving in this state as increased facilities for clinics and follow-up work are provided. Only in communities where adequate clinic facilities and nursing staffs are provided for the early discovery and care of incipient cases of tuberculosis does reporting approach completeness. Plans outlined in succeeding pages for extension of these services should do much to improve the situation in Greenwich which is not unlike that of the majority of communities of this class.

There have been no cases of small pox since 1917, due largely to the active enforcement of vaccination measures. It is stated that 98 per cent. of the school children have been vaccinated. While diphtheria mortality has been considerably reduced in recent years by the use of diphtheria antitoxin, the number of cases has not declined proportionally. The use of toxin-antitoxin mixtures for immunization against this dread children's disease has become so well standardized and its usefulness so well established, that it should be instituted widely by physicians for the protection of the children, especially pre-school children, of Greenwich.



The Municipal Hospital

Facilities for the hospitalization of cases of communicable disease, which for one reason or another cannot be satisfactorily cared for at home, are offered at the municipal hospital. This institution comprises

five buildings: A main building, largely of wooden construction, a cottage for aged and chronic non-infectious cases, the Witherell building originally designed for tuberculosis patients and at present closed, a cottage now rented to the engineer, and a cottage which is closed. The main building, with a capacity of 35 beds, is at present used as a hospital for acute communicable diseases and as a receiving station for tuberculosis cases many of whom are later sent to state sanatoria or other institutions. The communicable disease section of the hospital averages from three to ten patients, except in periods of epidemics. For the payment of bills, the municipal hospital (as is the medical treatment of the sick poor), is under the commissioner of charities, who also receives a special town appropriation for care of patients in private homes or in hospitals.

While hospital provision for communicable diseases is essential in a town of this size, it is our belief that the present arrangement is far from satisfactory. In the first place, it is not considered sound administrative policy to operate a communicable disease hospital under a board of charities. The proper care of cases of communicable diseases is a responsibility of the health department and should not be linked with the problem of indigent care. It should perhaps be noted that a working arrangement has been adopted by the commissioner of charities and the health officer who is also superintendent of the hospital, whereby the admission of cases, management, and purchases are conducted through the health department office. Of even greater importance is the fact that the present building is antiquated, and it is doubtful if it can be satisfactorily equipped as an isolation hospital worthy of Greenwich. This problem is sufficiently important to deserve the early attention of a special committee composed of the health officer, special representatives from the medical profession, the commissioner of charities, and other town officials.

The Witherell building, although closed, is well screened and has spacious porches, and modern conveniences. It is apparently well suited for a tuberculosis or other pavilion. Because of the relatively few cases of tuberculosis in the hospital at the time (average 3, maximum 5 or 6), the additional cost of nursing and other service is avoided by placing such patients on the top floor of the main building. While there is no question as to the saving in maintenance costs and nursing personnel by this arrangement, one is impressed by the fact that these quarters are possibly not the best suited for the hospitalization of tuberculosis cases because of fire hazard, lack of adequate toilet facilities, and apparent inaccessibility.

In view of the fact that only 42 cases of tuberculosis (all forms) were reported in 1924, while there were 12 deaths from this disease, and that in 1923, there were only 20 cases reported with 16 deaths, one is led to believe that reporting here, as in many other towns and cities of the United States is still very lax. It would also seem from these and other facts that cases are not discovered early enough to bring about material relief. In the town report of 1924 it is learned that 119 sputum examinations were made in the laboratory with 41 positive and 6 suspicious find-

ings, a total of approximately 40 per cent. positive or suspicious findings. This suggests a relatively high proportion of advanced cases discovered by the sputum smears alone. To be controlled, tuberculosis must be discovered in its early stages, before advanced changes have occurred and dissemination to other members of the community has resulted,

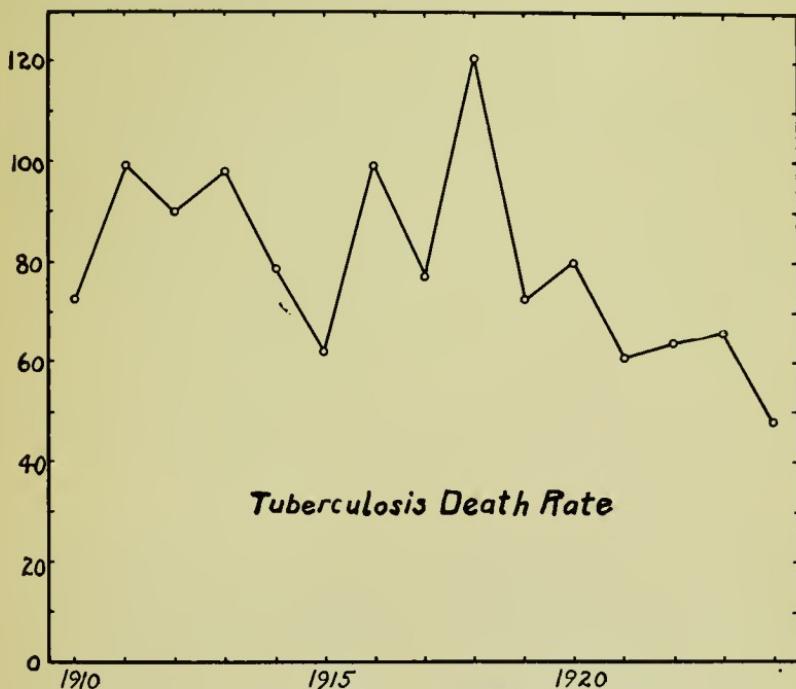


Fig. 2 Number of Deaths from Tuberculosis per 100,000 Population Greenwich, 1910 to 1924

A more thorough search by all the nurses in the community for suspicious and contact cases of tuberculosis, with a wider utilization of clinic facilities provided at the Greenwich Hospital especially for cases financially unable to employ a private physician, would seem to be the next step in improving this situation. Consideration might also be given to the desirability for establishing a preventorium, open air classes, and a vacation camp for children, not actively tuberculous but contact cases of those found to be physically below standard as a result of malnourishment, or other causes.

**Public Health Laboratory.** The health department laboratory in charge of a bacteriologist, serves a useful purpose in the routine analyses of samples of milk and water, and in the diagnosis of important communicable diseases, as diphtheria, typhoid fever, malaria, and tuberculosis. A total of 507 laboratory operations were reported for 1924, consisting of the examination of 383 disease specimens and the analysis of 110 samples of milk and 14 samples of water. In addition, 267 vaccinations were performed by the bacteriologist-epidemiologist. This does not represent the entire scope and volume of laboratory operations as

considerable routine laboratory work is done at the general hospital, while certain types of specimens are sent to the state laboratory or to private laboratories.

The public health laboratory equipment and methods used are modern. It is believed that fuller use of a laboratory of this type might well be made in a community of 25,000 people.

**Housing and Sanitation.** In a previous section of this report, reference has been made to the fact that most of the houses in Greenwich are of the single family variety, and that there seems to be no serious problems of over-crowding although there may be a few individual cases where conditions are not entirely satisfactory. Several houses in different districts were visited in the course of our inspections, and most of them were in fairly good condition at that time. Most of them are not over two stories in height with fairly liberal window space, and do not present serious problems except from the standpoint of garbage and waste disposal and in certain districts, safe water supply.

The practice in Greenwich to include as a part of the duties of the board of health general nuisance inspection and the supervision of housing conditions in occupied dwellings is in accordance with current tendencies, but the staff provided for this purpose is entirely inadequate to handle the problem. It should be borne in mind that Greenwich is a town of several communities widely separated. These communities are growing in size and are becoming more thickly settled. In many of them, a large foreign population adds to the problem. A part time inspector whose major duties consist in plumbing inspection, cannot begin to cope with the situation. He can hardly find time to respond to urgent complaints, and has no opportunity to make routine inspections of general conditions on his own initiative. The town report for last year shows that there were made 693 inspections and re-inspections of plumbing, with 90 inspections of dumps, 68 of mosquito ditches, 160 of barber shops, and 65 of public toilets. This is a creditable showing for the personnel allowed, but it does not begin to meet the problem which exists, and this fact is well recognized by the health department.

It is customary to have an annual clean-up campaign, and \$500 is appropriated for the purpose to be spent by the health department. There is needed a regular system of sanitary inspection throughout the various districts of the town, by a trained inspector who can give his entire time to this activity, can advise in fundamental principles of environmental sanitation, and can maintain a general clean-up campaign throughout the year. This inspector should be in position to make routine sanitary inspections, follow-up complaints, and supervise the anti-mosquito work, as well as give advice concerning problems of water supply, sewage disposal, and drainage. These problems are particularly acute in districts outside the borough, as in sections of Glenville, Mianus, East Port Chester, and Cos Cob, for example. Conditions in the so-called "Nigger Hollow" and "Paradise Alley" sections are extremely serious from a sanitary and drainage standpoint.

In making these statements we are aware of many difficulties in addition to lack of personnel, not the least of which is the character of the soil throughout most of these areas. Stone foundation covered by a thin layer of clay can not fail to give rise to serious drainage problems, especially in districts where cesspools are largely used for disposal of sewage. At the same time, the people of these communities need advice concerning the proper type of disposal systems to install under these conditions. They must be stimulated, and in some few instances perhaps forced to clean up their yards and do away with potentially dangerous shallow wells of which there are approximately 600, and of old-fashioned privies of which there are about 500. These problems can only be met by a well-trained person who can give his entire thought and energy to the task.

In one district surveyed in detail (Glenville), of a group of 35 houses studied all but two were provided with old-fashioned privies, the remaining two being equipped with flush toilets and apparently suitable cesspools. In the majority of cases the privy was placed near enough to the stream to endanger its purity, while in several cases the privy was designed to discharge directly or indirectly into the stream. In certain instances wells are so located as to be in line for pollution from the privies above. The soil was usually of rock with a thin layer of clay, between the privies and the shallow wells. In none of these cases was a reasonably fly-tight vault discovered. Several wells of an unsatisfactory type were



Illustrations of Drainage Problems in Greenwich

used by many families in common with a consequent increase in the chance of pollution by washing of foreign material through the crevices in the plank covers. The stream mentioned has become essentially an open sewer with wastes of various kinds dumped along the banks. Yet one woman was observed to dip up water with a bucket at a point about 50 feet below an overhanging privy and 15 feet from the discharge pipe of her own home. The subsequent history of the use of this water and of the bucket could not be determined. While this does not represent the general situation in Greenwich yet as shown by the accompanying photographs, these conditions do exist, and add materially to the problems of the health department, particularly as they exist in districts inhabited largely by foreigners not yet familiar with American standards of living.

While plumbing inspection is an important function of city government it is no longer considered a proper activity for the health department. It is, therefore, suggested that consideration be given to the desirability of transferring plumbing inspection from the health department to a special department of plumbing, or building and plumbing. With the funds equal to the amount now set aside for plumbing and sanitary inspection it would be possible to secure a man trained in problems of sanitation to develop and carry out a system of general sanitary inspection for the whole town.

**Anti-Mosquito Work.** Special measures are directed against the breeding of mosquitoes, by draining marshy lands, cleaning ditches, filling and oiling. A sum of \$4,000 has been appropriated for this work during the present year. The presence of malarial mosquitoes in areas inhabited by large groups of foreigners from countries where malaria is prevalent, makes these precautions necessary from the standpoint of health as well as of nuisance prevention.

**Garbage Collection and Disposal.** In the borough, garbage is removed by contract and dumped on land in the Hamilton Avenue section only a short distance from the school house and at the rear of an Italian settlement. As shown in the accompanying pictures, conditions at this dump are far from satisfactory. The garbage is not promptly covered; men, women and children are allowed to pick over the refuse and garbage and carry away the material in baskets or wagons for whatever use they may care to make of it; flies breed in large numbers and rats are abundant. The whole territory in this vicinity is unsightly and insanitary although efforts are made by the health department to improve the situation and men are employed to cover the material.



The Garbage Disposal Dumps

In the remainder of the town outside the borough, collectors are licensed by the health department. Collections are usually made in town three times a week, and in the summer season from the center of town, daily. Regulations of the Board of Health require either specially constructed wagons or the use of special galvanized iron containers. The individual collectors dispose of the garbage by feeding it to pigs.

It seems apparent that while the collection system is fairly satisfactory in most of the sections of town, the disposal system is quite inadequate. It is therefore urgently recommended that early consideration be given to the proposal already made by the health officer for the adoption of some method of garbage and refuse disposal which will be sanitary and adequate for the local situation. It should be remembered, however that there is no single method of disposal applicable in all cases, and consequently the various factors connected with the local situation must be studied in detail before arriving at a conclusion as to the method best adapted to conditions in Greenwich.

Again we venture to state that the health department is burdened with an activity in the collection and disposal of garbage which more properly belongs to a department of engineering or public works. From a financial standpoint alone this amounts to an expenditure of nearly \$3,000 yearly for a type of work which has little bearing on health promotion. It is therefore urgently recommended that the responsibility for this activity be removed from the health department and placed in the hands of an engineering department, the health department co-operating, however, in efforts to prevent nuisances.

**Food and Dairy Inspection.** Greenwich undoubtedly has one of the best milk supplies of any community of its size in the East. The restaurants and food handling establishments were generally in good condition at the time of our inspection. We were impressed, among other things, with the fact that vegetables and fruits were not displayed on the sidewalk, but were kept inside away from the dust of the street, from flies and from domestic animals. This is a commendable procedure, in our opinion, which might well be adopted in many other places. The conditions indicate the effective results of a systematic inspection service carried on over a period of years.



Round Hill Pasteurizing Plant

The report of the food and dairy inspector for 1924 shows that 110 samples of milk were collected for analysis, 451 inspections were made of dairies and milk plants, and 560 inspections were made of food stores. The fact that in the routine inspections, approximately 40 per cent. of

the dairies scored over 75 per cent, 12 per cent of them (including most of the large producers) scoring 90 or over, while only 4 per cent. scored less than 60 speaks well for the sources of the milk sold in Greenwich.

A tour of inspection was made of a group of the dairy farms and all the milk plants supplying milk and cream to the town. If our cross section of the situation obtained from this fairly extensive survey is representative of the general situation, as we believe is the case, it may be stated that unusually good conditions exist on the whole, at the dairy barns and at the milk plants. Incidentally it may also be remarked that the only milk plant located in town is one of the best we have ever inspected in communities of this size. It is gratifying to note that at least 80 per cent. of the milk is pasteurized.

**Infant Hygiene and Nursing.** Reference has already been made to the fact that one nurse works directly from the health department office and devotes her time largely to communicable disease control. This nurse also does school nursing in the parochial school. Among other activities in 1924 the department nurse made 2,029 home visits, 4,095 inspections of parochial school children, and 697 inspections of public school children for re-admission to school after having had a communicable disease or having been a contact case. Three additional nurses work in as many districts of the town, each maintaining an office in a district infant welfare station.

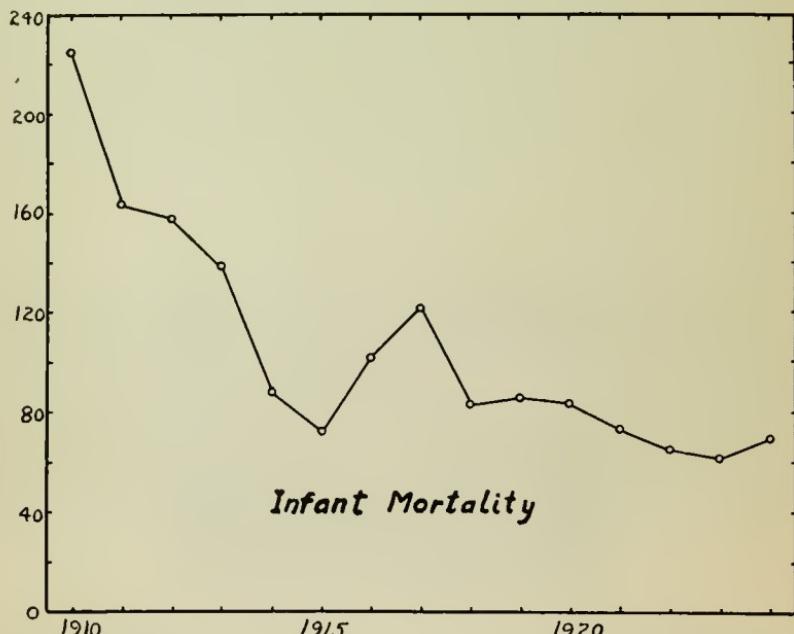


Fig. 3. Number of Deaths of Infants (Under 1 Year of Age) per 1,000 Live Births, Greenwich, 1920 to 1924.

To obtain a clearer conception of this problem, it may be well to consider briefly certain outstanding features. During 1924, there were 529 live births and 15 still births in Greenwich. Of the total live births, 81

per cent were delivered by physicians and 19 per cent. by midwives. It is gratifying to report that 49.1 per cent. were born in a hospital. Of the 102 babies delivered by midwives 44 were of Italian parentage, who as a race, still employ midwives more commonly than do most of the other groups. Only 9 per cent. of the babies of native mothers were delivered by midwives while 64 per cent. were delivered in a hospital. The fact that nearly half of the babies born during the year were to mothers of foreign birth, indicates an important social and public health problem.

It is also instructive to observe that of the 32 babies who died in 1924 before their first birthday, 17, or over half, were under one month of age. This fact suggests above all a need for more extensive prenatal care. Of the total infant deaths, 15 were attributed to congenital causes, 10 to infectious diseases, and 7 to digestive causes. A study of table 2, page 8, and Fig. 3, page 20, indicates a notable decline in deaths of infants under one year of age per 1000 live births from an average of 148 for each year 1910--14 to 69.3 in 1924.



**Hamilton Avenue Welfare Station**

The three health stations are located in three sections of town where the need for this special service is considered greatest. The people of these districts are largely of foreign birth. Each of the stations has the benefit of the time of two physicians who volunteer their services alternately for the clinic sessions which are held weekly. Babies brought to the stations are weighed, and their mothers are given advice concerning diet, and treatment when deemed necessary. In only one of the stations were records of findings and of advice given concerning the child as

complete as would seem essential for this type of work. One of the stations is located in a new house where a large reception room with physician's room adjoining is provided. These rooms are attractive, and the receiving room is light and spacious. The nurse is assisted by a capable Italian woman who lives in the house and acts as matron for the station, which is largely frequented by Italian mothers and their babies. Visits with the nurse showed that the people of this district appreciate the service rendered, and are responsive. The other two stations seem to be well located, and the service rendered corresponds essentially to that just outlined. Consideration might well be given to the possibility of placing the clinic physicians on a pay basis and developing the work to include regular physical examinations of babies brought to the station.

The need for a social service worker in many of these districts became apparent in our visits. In fact some of the nurses are attempting to do much of this work which is pressing, although many of the problems are entirely out of the nursing field and equally pressing nursing problems seem at hand.

A summary of the reports from the three health stations gives a total attendance at health conferences, including babies and other children as well as mothers, of 2,619. A total of 97 visits of expectant mothers to two of the stations is also reported. The district nurses made 4,714 home visits during the year and two of them referred 157 cases to private physicians, while 88 cases were referred to the dispensary and 69 to the hospital. Practically no emergency bedside nursing is done by any of the nurses.

In general it may be stated that while all of the nurses are energetic in their work, and are performing an important service, there seems to be a rather definite lack of co-ordination of activity and of realization of the nursing problem from the standpoint of the community as a whole. This fact is further emphasized when consideration is later given to the problem of school nursing, for it is clear that there is over-lapping and needless duplication of effort between the two groups which can only be relieved by the development of a co-ordinated nursing program and the establishment of adequate nursing supervision under a well qualified public health nurse. The ideal plan would naturally be to have all nurses in the community work under a highly trained supervising nurse from a central office.

**Dental Hygiene.** Dental hygiene work among school children is carried on by the health department under the direction of a dentist assisted by two dental hygienists. A well equipped dental clinic is located at the Greenwich Hospital and is open daily for two hours for any necessary repair work and special dental treatment.

During the school year the two dental hygienists take the schools in rotation, completing the necessary work in each school before going to the next in order. The work is primarily confined to the children of the first three grades. On entering a school an initial talk is given the children

on the care of the teeth, the six year molar, diet and allied subjects. Tooth brush drills are carried out and effort is made to see that all children have tooth brushes. Beginning with the older children in the third grade, an examination is made of every child's mouth. Teeth are cleaned and special attention is given to the gums and to the six year molars. A record is kept of the condition of the teeth of each child. Parents are advised of dental defects found, and if financially able, are urged to consult their own dentists, otherwise to have the work performed at the dental clinic. Each school receives one visit a year so that a child entering the first grade receives three examinations in the course of three years, at the end of which time he should be grounded in dental hygiene fundamentals and should have teeth in comparatively good condition.

From January 1923 to January 1924, approximately 1,600 children were attended by the dental hygienists, and 148 children were examined by the dentist and necessary treatment carried out. The routine work of the clinic is believed effective, and the results of the dental hygiene work in the schools are evident upon visiting different rooms and observing the children and their responses to questions relating to mouth hygiene.

**School Health Supervision.** Supervision of the health of children of the public schools in Greenwich is conducted by the Town School Committee. This work is carried on by a technical staff consisting of two medical inspectors (part time) and three nurses. There are also two instructors in physical education. As previously stated in another section of this report, the dental hygiene work is performed under the health department with excellent co-operation from the schools.

The enrollment in the public schools in 1924 was 4,655. It has already been pointed out that a large proportion of these children are of foreign born parents. There are in the town one high school, eight elementary schools, six one-room public schools, five private schools, and one parochial school. The supervision of children in the parochial school is under the direction of the health department. During the last school year \$6,300 were spent for health work, exclusive of dental hygiene work, in the public schools.

There are several excellent school buildings, with modern conveniences, adjustable seats and proper lighting arrangements.

From the standpoint of sanitation, a few of the schools, particularly those in the outlying districts, have not the modern sanitary facilities for satisfactory waste disposal, and safe water supplies which would seem necessary for public schools. Ventilation facilities are also lacking in a few cases, while in others the ventilation equipment is not operated satisfactorily to prevent overheating, and to allow the entrance of fresh air and the escape of warm stale air. Most of the factors, however, are recognized by members of the school committee who are gradually im-

proving the general situation in this regard.\* It would be desirable to include in these improvements the installation of a thermometer in every room, so graduated that attention is readily called to a rise in temperature above 68 degrees F. which is considered the optimum for school rooms.

All children are inspected on admission or early in the year by the school physicians assisted by the school nurses. Special attention is given to the condition of the eyes, ears, nose, throat, and skin. No examinations are made of heart and lungs. Subsequent inspections are made throughout the year by physicians and nurses, the former endeavoring to see each child at least once a month, while the latter devote their time to work in the different schools and in making home visits. Inasmuch as no regular thorough physical examinations are made, it is recommended that consideration be given to the extension of the present program to include a complete examination, including heart and lungs, at least twice during the school career.

While excellent record cards are provided for recording physical defects or other data relative to the children and their families, these cards are not filled out as completely as would seem desirable for most effective follow-up work. Lack of complete records of nursing visits and other activities also works an injustice on the nurses themselves, because of the difficulty of evaluating the types of problems met and the volume of work performed.

Three-day absentees are followed up by nursing visits to the homes to ascertain the cause, and to render any assistance needed. Before a re-admission to school after absence for this period of time or because of communicable disease, a child must be seen by the school nurse and present a certificate of health from the communicable disease nurse or a physician. It is noteworthy that vaccination of school children has been widely performed and as previously stated, it is believed that 98 per cent. of the school children have had the benefit of this protective measure. Diphtheria immunization work is largely handled by private physicians. Communicable disease in the schools has been kept at a low rate for several years, due largely no doubt to the activities previously outlined, and to the watchfulness and co-operation of principals and teachers.

The nurses also give special health talks from time to time to the children to encourage the development of proper health habits. In all, about one and one-half hours a week are given to instruction in hygiene and physical education. The only special classes are for children found to be definitely backward in their school work. These opportunity classes, so-called, serve an important purpose in nearly every school. In many schools, attention is directed to nutritional factors through the regular monthly weighing and measuring of children to determine whether

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\*A careful survey of the schools of Greenwich was made in 1912 under the auspices of the Russell Sage Foundation by L. P. Ayres, whose published report gives detailed information concerning the situation at that time. Many changes and improvements have been made since the survey.

or not growth and development are proceeding normally. There are three parent-teacher organizations in as many schools.

In order to secure the correction of physical defects found among these children, or to discuss special problems with the parents, home visits are frequently made. Throughout the country, this phase of school health work has come to occupy an important place for many problems can only be met by friendly talks in the home. In visiting with the school nurses, however, one is impressed by the fact that much of this home nursing in Greenwich seems to be of a social service character, rather than strictly nursing. To a certain degree this is to be expected, but one questions if this is not often stressed at the expense of real nursing, a condition which not infrequently arises when nurses work individually without the supervision of one who can view the work of the community broadly from the standpoint of a person who is herself a public health nurse.

There also seems to be a considerable over-lapping and in certain cases duplication of efforts on the part of the different nurses working in town. This situation is particularly to be regretted in view of the very great need for extension of nursing service and for maximum results from those already in the field. It has been stated that for adequate nursing service, a community needs one nurse for every 2,000 people. Obviously, Greenwich falls short of this goal, by more than four nurses, considering the community problem as a whole. While we do not suggest the immediate addition of several nurses to the present health department and school committee staffs, we do believe that a very definite increase in service rendered the community would result if a highly trained supervising nurse could be secured to map out a nursing program for the community as a whole, and to supervise the activities of all nurses working in Greenwich.

We venture to suggest further that from the standpoint of the whole community, the greatest good would be accomplished if the health department district nurses and the school nurses were to be united even more closely than at present under a capable supervising nurse, on the generalized district plan, whereby each nurse would perform all public health nursing work, including prenatal, infant, and school hygiene, in a given district. Such a plan would seem to us entirely feasible if this nursing work were to be carried on under a joint committee, including the superintendent of schools and the health officer.

It may be stated that such a plan has been successfully carried out in several different towns and cities, including, Columbia, S. C., Asheville, N. C., Columbus and Dayton, Ohio, among others, and in special districts of large cities, including Minneapolis, Minnesota. In the last mentioned city it was found that in the district where generalized nursing was carried out, approximately three times the nursing service were rendered to families as in the rest of the city where specialized nurses performed the various kinds of nursing work.



Health Department, District, and School Nurses in Greenwich

In making this recommendation, too, we also have in mind the fact that excellent relations already exist between the two departments, as evidenced by the success of the dental program, and the co-operation among the various nurses now in the field. We are, therefore, encouraged to believe that consideration of the possibility of rendering even greater service in the various districts of the community may be given by the proposed joint committee.

**Recreation Facilities.** The schools in town are in general fairly well provided with playground space, although in some instances these facilities are not entirely adequate. There seems, however, to be a lack of supervision of play. It is urged that consideration be given to the need of establishment of playgrounds at each of the public schools, and the provision of proper supervision. For the town as a whole, Bruce Park, with its eighty acres, is the largest, with Byram Beach next in size. There are also playgrounds located at Island Beach and at Havemeyer Field. It is noteworthy that the importance of playground facilities is recognized, especially for the children in town, and that efforts are being made for their extension and proper care.

**Accident Prevention.** All over the country at the present time, energies are rightly being directed toward the reduction of accidents of all kinds, particularly automobile accidents. From the records of the

Commissioner of Motor Vehicles of Connecticut, it is learned that there were recorded in 1924, 347 automobile accidents within the limits of Greenwich. In these accidents, 353 local cars were involved, and 250 cars owned outside the town. This seems to be a large number of such accidents for a community of this size, and a study of the records for all the towns of the state emphasizes the fact. The Chamber of Commerce is to be commended for its activity in calling attention to this important situation which concerns all groups of people of all ages.

**Greenwich Hospital.** The Greenwich Hospital is an excellent institution controlled by the Greenwich Hospital Association. It has a bed capacity of 106, while the actual number of beds used runs from 50 to a maximum of about 84. All types of cases are received except communicable diseases. The hospital has a well equipped laboratory for bacteriological, immunological, and chemical work, and a good X-ray service. Under health department auspices, a dental clinic is operated in this building primarily for school children.



The Greenwich Hospital

A small general clinic or dispensary is also maintained, particularly for the benefit of cases referred by district and school nurses. In view of the fact that the hospital is centrally located, and that this offers the only clinic facilities in town, it would seem that an expansion of this present service would result in material good from the standpoint of the community as a whole. It is recommended that consideration be given

to the possibility of arranging for the operation of this clinic in a manner to give special hours in the week for pre-school and school children, and additional hours for tuberculosis and venereal disease patients and suspicious or contact cases. This would necessitate the provision of special medical and surgical service for the different clinics and the development of a simple but effective record system, but it is believed that a community of this size and character needs such service.

**Department of Charities.** The activities of the commissioner of charities are many and varied, many of them bearing directly upon the health problems of Greenwich. In all, 2,694 interviews were held or visits made during the past year in connection with this work. In addition to the handling of special relief funds, the treatment of the sick poor and the placing of feeble-minded children in proper institutions or homes are important duties. The care of the insane comes under the same jurisdiction as does the Town Home. During the year also, with the co-operation of the Greenwich Press, 10,231 quarts of milk and 63 dozen eggs were distributed to 29 families, chiefly Polish and Italian where the children were much undernourished and generally below normal physically.

Another important duty, with which this department is at present charged, is the administration of the municipal hospital for communicable diseases in conjunction with the department of health through the health officer who is superintendent of the hospital. This includes the care of tuberculosis cases who are temporarily cared for in the hospital in town, some of whom are in the far advanced stages of the disease. A few tuberculosis cases, cared for at home but needing some form of relief, are also brought to the attention of this department. During the past year this number has included four children in town.

In studying the work of this agency and other problems there seems to be manifest a need for a general social service worker in town whose whole time might well be given to the various problems which are constantly arising and to whom special cases might be referred by nurses and others in the field. It is understood that this problem is recognized by the department of public charities and that consideration is being given to the importance of special services of this character.

Furthermore, regardless of how well the communicable disease hospital work may be administered at present, as indicated elsewhere in this report, it does not seem to us that such work should be included in the activities of the department of charities. The problem of communicable disease control and hospitalization of communicable disease cases is essentially the responsibility of the health department. It would, therefore, seem to be a wise measure to transfer this activity to the health department. Attention has already been directed to the type of building now in use and to the advisability of considering improved means of hospitalization as well as reorganization.

**Voluntary Organizations.** During the past two years, the Woman's Club has maintained a particular interest in factors bearing on the health and welfare of the community through its standing committees on welfare, civics, and education. The welfare committee is primarily interested in tuberculosis problems and directs the seal sale campaign. This committee also maintains and supervises the Day Nursery at East Port Chester where 25 children, largely of foreign parentage, are cared for daily and given breakfast, dinner and an early supper. These children are medically examined before admission to the nursery and are kept under medical supervision while they are thus under care. It is believed that for the present at least, this nursery performs a useful function in this particular district. It seems to us that the Woman's Club, through these committees, may, and does, perform a very useful function in studying the manifold problems of the town, and in stimulating community support of important health and welfare activities.

The Emily Bruce Shelter fills a useful place in the community in providing a home for children of 3 months to 6 years of age who have not suitable means of support elsewhere. Children are admitted on the certificate of a physician given on the basis of a physical examination. This institution is licensed by the State, and maintains supervision over the health of its 20 children through medical and nursing care.

The Greenwich Day Nursery is conducted under a board of women directors and cares for approximately 45 children between the ages of 6 months and 9 years. Before admission children are examined by a physician on the staff of the Greenwich Hospital who also makes periodic examinations thereafter and exercises supervision in cases of communicable disease. A child who has been absent from the nursery two weeks on account of illness must have a physical inspection before re-admission.

The Young Men's Christian Association provides opportunity for athletic classes for men and boys, including swimming classes in a pool from which samples of water are regularly analyzed in the state laboratory. A plan is under consideration for providing physical examinations of all members upon admission and regularly thereafter. Such a complete examination by a physician is needed, particularly for those engaging in games and athletics.

A commendable program of health supervision has been developed by the Young Women's Christian Association for its members. All members are urged to have regular physical examinations, made by a physician annually, and extra credits or points are given those who take advantage of this opportunity. Furthermore, all girls and young women who engage in games or athletic contests are required to pass a complete physical examination before participating in such sports, and their response is gratifying. In all, 191 physical examinations and re-examinations were made last year. The correction of physical defects is encouraged through home follow-up work by the physical director, and by special conferences. Private classes are held for corrective work.

**Summary and Recommendations.** In the earlier sections of this report there has been presented a somewhat detailed account of the health work carried on in Greenwich. It has been shown that this is a progressive residential community of approximately 25,000 people.

The official health department has properly assumed responsibility for the major portion of the health program, including sanitation and food control, communicable disease control, and infant welfare. School health supervision in the public schools is exercised by the town school committee, except for dental hygiene work and communicable disease control which are activities handled by the health department in co-operation with the school officials. The children of the parochial school are under the direct supervision of the health department, while those of private schools are required to be vaccinated. They are otherwise not subject to local supervision except in case of an outbreak of communicable disease, although it is understood that each school has its own physician for this work.

The general health situation is fairly good, but the problem is somewhat complicated by the fact that the town is made up of several small districts rather widely separated, a few of them largely populated by foreigners, and having individual sanitary problems of considerable importance. The combined nursing staffs of the health department and school committee are nearly adequate in size for the present situation, except for supervision by an experienced public health nurse. Due primarily to lack of central nursing supervision, however, there is apparent duplication of efforts and failure to accomplish maximum results for the community as a whole. It is believed that most of these conditions could be easily remedied with very little additional outlay, by minor changes in organization, with closer co-ordination and supervision of nursing activities.

In order that more concise recommendations may be made, it seems desirable to refer again to certain outstanding factors discussed in the body of the report.

**1. General Sanitation.** In several of the sections of town, particularly the outlying districts, there are many sanitary problems of sufficient importance to demand the attention of a full-time trained, sanitary inspector. A large part of the time of the present part-time inspector is necessarily given to plumbing inspection which is not a health department function but should be handled by a separate branch of municipal government.

It is, therefore, recommended that plumbing inspection be transferred from the health department and that a well trained sanitary inspector be employed on a full-time basis.

**2. Garbage and Refuse Disposal.** The present method of disposal of garbage and refuse, consisting primarily in dumping on land within town limits, is far from satisfactory and has resulted in a continuous

nuisance. Furthermore, this activity should be handled by a department of engineering or public works, with co-operation from the health department only in prevention of nuisances. At present much time and money are expended by the health department on this work which has relatively little to do with prevention of disease or health promotion.

In view of these facts, it is recommended that garbage and refuse collection and disposal should be transferred from the health department and placed in the hands of a competent engineer. It is further recommended that a commission be appointed to give early consideration to a satisfactory method of disposal of garbage. Consideration might well be given to the creation of a Department of Public Works to include general oversight over garbage collection, and disposal, plumbing, building, water supply, and possibly sewage disposal. Such a plan has apparently proved satisfactory in Middletown, Conn., among other communities of approximately this size.

**3. Hospitalization.** Adequate provision for hospitalization of cases of communicable diseases in a community, including tuberculosis and venereal diseases, is essential. While the number of beds provided at the municipal hospital are sufficient for existing needs, the present arrangement seems unduly expensive, and the three-story wooden structure is entirely unsuited for the purposes for which it is now used. Furthermore, it is not considered sound policy to operate a communicable disease hospital under a department of charities. It may more properly be administered by the health department which is responsible for communicable disease control.

It is consequently recommended that the communicable disease hospital be transferred as a special division of the health department. As outlined in a previous section of this report, it is further recommended that a special commission be appointed to consider the possibility of securing more adequate quarters for the hospitalization of cases of epidemic disease, tuberculosis, and venereal disease.

#### **4. Special Medical and Clinic Service:**

A. An excellent beginning has been made in the development of clinic service for children as well as adults at the Greenwich Hospital. In order that this clinic may serve its greatest usefulness in the community, it is recommended that its services be extended to give special hours in the week for different types of cases, including tuberculosis and venereal diseases, as well as the treatment of special physical defects and minor surgical conditions. The keeping of careful records is also desirable. A dental clinic has already been established at the hospital and is rendering important service to school children and to a limited number of emergency patients.

B. An entirely different type of clinic service is rendered at the infant welfare stations, which are primarily designed as well baby conferences. The usefulness of these conferences, maintained by health department nurses and volunteer physicians, would be enhanced if more complete

and continuing records were kept concerning the individual baby's condition and family history. It is also recommended that efforts be made to secure more medical service (possibly on a pay basis) at these clinics or conferences to permit more complete medical examination of babies and of expectant mothers who should come in increasing numbers for advice in matters of diet and personal hygiene.

C. An excellent beginning has been made in school medical inspection, and this has undoubtedly had its influence in reducing the spread of communicable diseases. Physical examinations, however, are not as complete as is considered essential according to modern standards. It is therefore recommended that provision be made for a complete medical examination of each child, to include heart and lungs, at least twice during school life, and that careful records of defects and of the results of follow-up work be maintained.

**5. Nursing.** A special nurse is provided for work in communicable disease control and in supervision of children of the parochial school. Three district nurses work independently in different sections of the town, with headquarters at the infant welfare stations located in their districts. Three nurses are employed by the town school committee for work in the various schools and school districts of the town. It has been observed that the work of these three different groups of nurses often overlaps and that sometimes each of them may have visited in the same home on the same day. In fact a district nurse and a school nurse not infrequently work together in their afternoon calls, resulting in complete duplication of efforts and loss of valuable time which is urgently needed elsewhere.

As a means of bringing about co-ordination, and in order that maximum results from nursing activities for the whole community may be attained, it is urgently recommended that a well trained supervising nurse be employed. It seems to us that a joint committee on nursing from the board of health and the town school committee, including the health officer and school superintendent, might well be appointed. Among other nursing problems, this committee might well consider the possibility of pooling the services of the district and school nurses so that each would do all the prenatal, infant welfare, and school nursing in her district, thereby avoiding duplication and serving the family as a unit. Under this joint committee, the supervising nurse could operate from a central office, in which all the nurses would be assembled from time to time for frank discussions of their various problems. From such a central office a highly trained supervising nurse could view the community problems broadly, and bring about a more perfect organization of activities leading to greater service to the citizens of Greenwich.

IRA V. HISCOCK,  
Assistant Professor of Public Health





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